What Is Claimed Is:

1. A method of producing a CuZnAlZr oxide catalyst, comprising the steps of:

reacting a mixture of aqueous solutions of each nitrate of Cu, Zn, Al, and Zr with an aqueous NaOH solution and aqueous $NaCO_3$ solution;

producing a precipitate by coprecipitation;

aging, filtering, washing, and drying this precipitate to prepare a catalyst precursor consisting of a CuZnAlZr layered double hydroxide; and

then calcining this catalyst precursor in an air ambient atmosphere to obtain a CuZnAlZr oxide.

2. The method of producing a CuZnAlZr oxide catalyst according to Claim 1, wherein the molecular ratio of Cu, Zn, Al, and Zr in the starting solution is (Cu + Zn)/(Al + Zr) = 2 to 4.

3. A CuZnAlZr oxide catalyst for hydrogen production by oxidative steam reforming of methanol, which is produced by the method according to Claim 1 or Claim 2.

4. A CuZnZrCe oxide catalyst for hydrogen production by oxidative steam reforming of methanol, which is produced by the steps of:

preparing a catalyst precursor consisting of

aurichalcite; and

then calcining this catalyst precursor in an air ambient atmosphere to obtain the CuZnZrCe oxide.

5. A CoCuZnAl oxide catalyst for hydrogen production by oxidative steam reforming of methanol, which is produced by the steps of:

preparing a catalyst precursor consisting of aurichalcite; and

then calcining this catalyst precursor in an air ambient atmosphere to obtain the CoCuZnAl oxide.

6. A method of producing hydrogen gas, comprising the step of:

converting methanol to hydrogen gas by oxidative steam reforming of methanol in the presence of both air and steam using the oxide catalyst described in any of Claim 3 to Claim 5.

7. The method of producing hydrogen gas according to Claim 6, wherein

oxygen/methanol (molar ratio) = 0.1 to 0.5 and

steam/methanol (molar ratio) = 0.8 to 2.0.

8. The method of producing hydrogen gas according to Claim 6, wherein the reaction temperature is 200 to 250℃.